

**[12] Invention Patent Application Description**

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[54] Title of the invention: Coffee beverage, coffee liquor and preparation thereof.

## [57] Summary

This invention is a type of coffee beverage, coffee liquor and preparation thereof, characterized by the fact that said coffee beverage contains the immersion extracted liquid of (mass ratios) coffee peel and shell 80-88%, sugar 10-18%, carbonated water, and food spices. Said coffee liquor uses grains 20-38%, filtered coffee skin, and shell 60-78%, which is mixed and extracted. The invention can change waste into a treasure, eliminating the environmental pollution caused by discarding coffee husks. Said coffee beverage and coffee liquid produced by said preparation has the same taste as coffee, and the remnant can be used as feed and fertilizer. The invention has the characteristic features that the raw materials are easy to obtain, the manufacturing process is simple and low cost, and the resource utilization value is high, offering promising scope for development, and creating a new economic growth point.

1. A type of coffee beverage, which is characterized by containing (weight percentage) immersion extracted liquid of coffee peel and shell (80-88%), sugar 10-18%, carbonated water, and food spices.

2. Preparation of a coffee beverage, characterized in that:

(1) The coffee peels and shells discarded during the shelling process are used as the raw material. After filtering, selected coffee peels and shells are placed in a container and fired under a gentle heat. During the production, table salt 1% is added. Heating is performed until the colour reaches coffee colour;

(2) The cooked coffee peels and shells are crushed into powder with 5-10 granularity, ensuring the powder is even;

(3) The crushed coffee peel and shells are soaked with 10-14 times the drinking water for 30 minutes. It is then heated to boiling for 20 minutes;

(4) After removal a plate and frame filter press is used to separate the juice and residue, after the separation of juice into the sedimentation tank it is precipitated for around 3 hours, filtered through the filter into the preparation tank;

(5) 10-18% of sucrose, carbonated water, and food flavouring are added to the preparation. When the mixture in the preparation tank is even, it is inspected, sterilized, and filled into the appropriate containers.

3. A type of coffee liquor characterized in that the ratio of raw materials (by mass weight) is grains 20-38%, and filtered coffee skins and peel 60-78%.

4. Preparation of a type of coffee liquor, characterized in that:

(1) The coffee peels and shells discarded during the shelling process are used as the raw material. After filtering, the selected coffee peels and shells are mixed evenly with 20-38% grain. After mixing, the mixture is steamed in a pot for 45-60 minutes;

(2) 1-3% fermented yeast is mixed into the material, and sealed and fermented for 5-10 days;

(3) The fermented material is placed in a roasting container for distillation, and food colorant is used to adjust the colour of the created coffee liquor. The high degree of grain alcohol is adjusted to around 15-30 degrees, and the coffee can be inspected and filled into the appropriate containers.

#### **Coffee beverage, coffee liquor and preparation thereof**

This invention relates to the field of food technology, specifically coffee drinks, coffee liquor, and preparation thereof.

Coffee, cocoa, and tea are the world's three major drinks. Coffee production, consumption, and economic value ranks first in the world. In terms of international trade, coffee is the third most important consumable only secondary to oil in the primary economy. Its consumption is 3 times that of cocoa, and 4 times that of tea. Its value is high, being able to increase focus, eliminate tiredness, and bring benefit to consumers. However, currently, all over the world, coffee peel and shells are discarded, and this causes environmental pollution. Repeated experiments show that the coffee peel and shells contain a certain amount of nutrients, but to date, coffee peels and shells have not been utilized.

The purpose of the present invention is to make full use of waste produced by the existing technology, turning said waste into treasure, and providing a coffee beverage and coffee liquor and its preparation produced by coffee peels and shells.

This purpose of the present invention is realized as follows: The discarded coffee peel and shells are recycled. After a certain treatment process, coffee flavoured beverages and liquor are produced.

The specific program is as follows: Coffee beverage containing (weight percentage) immersion extracted liquid of coffee peel and shell (80-88%), sugar 10-18%, a suitable amount of carbonated water, and food flavouring. The preparation of the coffee beverage:

(1) The coffee peels and shells discarded during the shelling process are used as the raw material. After filtering, selected coffee peels and shells are placed in a container and fired under a gentle heat. During the production table salt 1% is added, and this continues until a coffee colour is achieved;

(2) The cooked coffee peels and shells are crushed into powder with 5-10 granularity, ensuring the powder is even;

(3) Crushed coffee peel and shells are soaked with 10-14 times the drinking water for 30 minutes. It is then heated to boiling for 20 minutes;

(4) After removal a plate and frame filter press is used to separate the juice and residue, after the separation of juice into the sedimentation tank it is precipitated for around 3 hours, filtered through the filter into the preparation tank;

(5) 10-18% of sucrose, carbonated water, and food flavouring are added to the preparation. When the mixture in the preparation tank is even, it is inspected, sterilized, and filled into the appropriate containers.

The raw materials ratio in the coffee liquor (by mass fraction) grain 20-38%, filtered coffee peels and shell 60-78%.

The preparation of the coffee liquor:

(1) The discarded shells and peels from the coffee peeling process are used as raw materials, after filtering, the selected coffee peels and shells are mixed with 20-38% grain. After mixing until even, it is cooked in a pot for 45-60 minutes;

(2) 1-3% fermented yeast is mixed into the material, and sealed and fermented for 5-10 days.

(3) The fermented material is placed in a roasting container for distillation, and food colorant is used to adjust the colour of the created coffee liquor, and the high degree of grain alcohol is adjusted to around 15-30 degrees. The coffee can now be inspected and filled into the appropriate containers.

After repeated experiments, and summaries, this invention discovered that a certain amount of nutrients are contained in coffee peels. Through certain technical processes, this can be used to make coffee beverages and coffee liquor. Turning waste into treasure, and eliminating the environmental pollution caused by discarding coffee husks. Coffee beverage and coffee liquor produced following the above process has a flavour the same as that of those produced from coffee beans. The remaining residue can be used as feed and fertilizer. This invention has the following advantages: easy to obtain raw materials, simple manufacturing process, low production costs, and high resource utilization, this means the prospects are apparent, and a new economic growth point can be created.

Figure 1 shows the coffee beverage processing diagram;

Figure 2 shows the coffee beverage processing diagram for the present invention.

The following embodiments of the invention give further details, but do not restrict this case.

Embodiment 1: (mass ratio)

(1) The coffee peels and shells discarded during the shelling process are used as the raw material. After filtering, 10kg of selected coffee peels and shells are placed in a container and fired under a gentle heat. During the production table salt 100g is added. This continues until the colour becomes coffee colour, around 10 minutes;

(2) The cooked coffee peels and shells are crushed into powder with 8 granularity, ensuring the powder is even;

(3) The crushed coffee peel and shells are soaked with 12 times the drinking water for 30 minutes. It is then heated to boiling for 20 minutes; the temperature is around 100 degrees;

(4) After removal a plate and frame filter press is used to separate the juice and residue, after the separation of juice into the sedimentation tank it is precipitated for 3 hours, filtered through the filter into the preparation tank;

(5) 18kg of sucrose, a certain amount of carbonated water, and food flavouring is added to the preparation tank. After ensuring the mixture precipitates in the tanks are 10-15 minutes, inspection, sterilization, and filling are carried out. Coffee beverages are obtained.

Embodiment 2: (mass ratio)

(1) The coffee peels and shells discarded during the shelling process are used as the raw material. After filtering, 69kg of selected coffee peels and shells are placed in a container and mixed with 29kg of corn then fired under a gentle heat for 50min;

(2) 2kg of fermented yeast is mixed into the material, and sealed and fermented for 5-10 days;

(3) The fermented material is placed in a roasting container for distillation, and food colorant is used to adjust the colour of the created coffee liquor, and the high degree of grain alcohol is adjusted to around 15-30 degrees, and can be inspected and filled into the appropriate containers. Coffee liquor is then obtained.